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LISTING OF THE CLAIMS

CLAIMS

1. (previously presented) A transducer for detecting movement of an article mounted for movement in a plane, the transducer comprising:

the article;

a heater facing the plane of movement of the article and having a temperature dependent resistance; and

an edge defined in the article between regions of different thermal conductivity; wherein, as the article undergoes the movement, the edge moves relative to the heater producing a corresponding variation in heat loss from the heater and a corresponding variation in resistance of the heater, and wherein:

the article is mounted for translational movement in the plane;

the edge is located in a plane surface of the article;

the edge is rectilinear; and

the heater comprises an elongated body overlapping and extending parallel to the plane surface and perpendicular to the edge; and

the elongated body comprises a silicon cantilever having a doped resistive region formed therein.

2-6. (canceled)

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1 7. (previously presented) A transducer as claimed claim 1, wherein the edge is located on the
2 periphery of the plane surface.

3 8. (previously presented) A transducer as claimed in claim 1, wherein the edge is formed as a
4 step in the plane surface.

5 9. (previously presented) A movement detection system for detecting movement of an article
6 mounted for movement in a plane, the system comprising: first and second transducers as
7 claimed in claim 1 operative in opposite directions along a common axis of movement of the
8 article in the plane.

9 10. (original) A movement detection system as claimed in claim 9, wherein the first and second
10 transducers respectively face first and second parallel edges of the surface.

11 11. (previously presented) A movement detection system for detecting movement of an article
12 mounted for movement in a plane, the system comprising: first and second transducers as
13 claimed in claim 1 operative in orthogonal directions of movement of the article in the plane.

14 12. (original) A movement detection system as claimed in claim 11, wherein the first and second
15 transducers respectively face first and second orthogonal edges of the surface.

16 13. (previously presented) A local probe storage device comprising: storage surface, local probe
17 storage array having a plurality of tips facing the storage surface; a scanner for moving the
18 storage surface relative to the array in a plane parallel to the array; and a movement detection
19 system as claimed in claim 9 for detecting movement of the storage surface relative to the array.

20 14. (original) A transducer as claimed in claim 1, wherein the surface is mounted for rotational
21 movement parallel to the heater about an axis of rotation.

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1 15. (original) A transducer as claimed in claim 14, wherein the edge is in the form of a side of a
2 slot formed in the surface and extending radially from the axis of the rotation.

3 16. (original) A transducer as claimed in claim 14, wherein the surface comprises a spoke
4 extending radially from the axis of rotation and the edge comprises a side of the spoke.

5 17. - 19. (canceled)

6 20. (previously presented) A method, for detecting movement of an article mounted for
7 movement in a plane, the method comprising: locating a heater having a temperature dependent
8 resistance to face the plane of movement of the article; defining an edge in the article between
9 regions of different thermal conductivity; and, detecting variation in resistance of the heater
10 corresponding to variation in heat loss from the heater as the edge moves relative to heater during
11 movement of the article in the plane, wherein the edge is located in a plane surface of the article,
12 wherein the edge is rectilinear, and wherein the heater comprises an elongated body overlapping
13 and extending parallel to the plane surface and perpendicular to the edge, and
14 wherein the elongated body comprises a silicon cantilever having a doped resistive region formed
15 therein.